

CLAIMS

1. A glycoprotein having the following properties:
  - (a) molecular weight: approximately 60 kDa (determined by sodium dodecyl sulfate-polyacrylamide gel electrophoresis), and
  - (b) ratio of carbohydrate content to protein content: 16.4:1.0 (carbohydrate:protein).
2. A glycoprotein obtainable by a process comprising the steps of:
  - (1) extracting *Tricholoma matsutake* with an alkaline solution or hot water,
  - (2) adsorbing the resulting extract by an anion exchange resin,
  - (3) eluting the adsorption fraction from the anion exchange resin with an eluting solution, and
  - (4) fractionating from the eluted fraction obtained by the eluting step a fraction having a molecular weight of 50 to 70 kDa by gel filtration.
3. A pharmaceutical composition comprising the glycoprotein according to claim 1 or 2, and a pharmaceutically or veterinarily acceptable carrier or diluent.
4. An immune enhancing agent, characterized by comprising as an active ingredient the glycoprotein according to claim 1 or 2.
5. An agent for promoting a recovery from stress, characterized by comprising as an active ingredient the glycoprotein according to claim 1 or 2.
6. An antitumor agent, characterized by comprising as an active ingredient the glycoprotein according to claim 1 or 2.
7. A method for an immune enhancement, comprising administering to a subject in need thereof the glycoprotein according to claim 1 or 2 in an amount effective therefor.
8. A method for promoting a recovery from stress, comprising administering to a subject in need thereof the glycoprotein according to claim 1 or 2 in an amount effective therefor.

9. A method for treating or preventing a tumor, comprising administering to a subject in need thereof the glycoprotein according to claim 1 or 2 in an amount effective therefor.
10. Use of the glycoprotein according to claim 1 or 2 in the manufacture of an immune enhancing agent or a pharmaceutical composition for an immune enhancement.
11. Use of the glycoprotein according to claim 1 or 2 in the manufacture of an agent for promoting a recovery from stress or a pharmaceutical composition for promoting a recovery from stress.
12. Use of the glycoprotein according to claim 1 or 2 in the manufacture of an antitumor agent or a pharmaceutical composition for treating or preventing a tumor.